

CHEM 226, SPRING 2009
ORGANIC CHEMISTRY LAB

Instructor:

Conference Hours:

If you need accommodations in this class related to a disability, please make an appointment with the instructor as soon as possible.

COURSE DESCRIPTION:

Spectroscopy exercises and synthetic organic chemistry laboratories.

RATIONALE:

Organic Chemistry 226 is a semester course and is tailored to students who are pursuing careers in sciences. The prerequisite for this course is concurrent registration in CHEM 224.

COURSE OBJECTIVES:

1. To learn lab techniques of organic synthesis and apply spectroscopy to identify reaction products.
2. To learn how to prepare laboratory records.
3. To be familiar with library resources to search for synthetic procedures.
4. To be familiar with safety regulations in the laboratory.

MATERIALS:

1. Textbook: K. L. Williamson, Macroscale and Microscale Organic Experiments, Fifth Edition.
2. Hardbound Notebook.
3. Students should wear approved safety goggles. These glasses should not have holes around their frames (they are sold at GSU and LATECH bookstores and True Value).

REFERENCES:

- Organic Chemistry, 6th Edition by Leroy G. Wade, Jr.
- Paul R. Young, ORGANIC CHEMISTRY ON – LINE web page:
<http://www.chem.uic.edu/web1/OCOLII/WIN/HOME.HTM>
- João Aires de Sousa, Infrared Spectroscopy for Organic Chemists Web Resources
<http://www.dq.fct.unl.pt/qoa/jas/ir.html>

ATTENDANCE:

All students are expected to attend and complete each scheduled lab class throughout the semester. **An appointment must be made with the instructor to complete any missed Lab experiments. An approved excuse must be presented before any make-up lab experiments are allowed. Laboratory experiments that are missed must be completed before the next regularly scheduled class period. Each student will be allowed a maximum of two(2) make-up Labs per semester.** Any student (including athletes) failing to complete at least (6) laboratory experiments and/or the corresponding written lab assignments will be assigned a course grade of **F**. **Students are responsible for learning the material covered during the missed class.**

Each student must show a valid, university issued identification card during exams and quizzes. No exam will be administered to a student without an identification card.

ASSESSMENT PROCEDURES:

Each student is required to answer individual worksheets for no bench labs, and request the instructor signature at the end of the class period. Laboratory assignments will not be graded if they are not signed. The instructor will follow the tentative schedule unless otherwise indicated.

Each student is required to prepare an individual laboratory report for bench labs. Follow the attached instructions from (a) to (q) to keep a laboratory record. The instructor will follow the tentative schedule unless otherwise indicated. Complete instructions (a) to (m) as the **pre-laboratory assignment and answer pre-lab questions**; the student will show this pre-lab and request the signature of the instructor before going to the lab. After students finish the experimental part of the lab (instruction (n)) they will need to request that the instructor sign their lab notebooks. Laboratory records will not be graded if they are not signed. Post-lab questions, analysis and conclusions will complete the lab records. Students should turn in their lab work on the due day.

Late Penalties:

Laboratory records, reports, presentations and/or exercises will receive late penalties. Late work grade will be reduced in 10 points per each week after the due day.

Technical Procedures:

Students should use equipment properly. In addition, safety procedures and cleanliness will be taken in account.

- **Safety Rules:**

Students have to obey safety rules. If not, students will lose points. Students can be dismissed from the lab and/or the course if they persist in violating safety rules.

- **Cleanliness:**

Students should leave everything clean after finishing bench work including balances. Place glassware and chemicals where they were found at the beginning of the class. The complete class will lose up to 10 points if shared equipment is found dirty such as balances and benches.

Midterm Exam:

A Midterm Exam will be held during class time and will be graded out of 100 pts.

Final Exam:

A Final Exam will be given during class time and will be graded out of 100 pts.

Lab Reports

Reports about two lab projects performed this semester will be graded out of 100 pts each.

Group Presentations

Students will give two group presentations to earn up to 50 points per presentation.

Evaluation of a bench laboratory class will be as follows:

Task	Points
Laboratory lab records (if it was signed by the instructor)	60
Technical procedures: safety and Cleanliness in the lab	20
Pre-Laboratory assignments; if done before class time	20

No bench labs will be evaluated as follows:

Task	Points
Lab. Assignment (if it was signed by the instructor)	100 pts

Course grade:

$\frac{\text{Your points}}{\text{Total number of points}} \times 100 = \text{Percent Grade}$
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Grade assignments:

Percent Grade	→	Letter Grade
90.0 to 100.0	→	A
80.0 to 89.9	→	B
70.0 to 79.9	→	C
60.0 to 69.9	→	D
≤ 59.9	→	F